

Draft
Executive Summary

PG&E LINE 108 NATURAL GAS PIPELINE

Environmental Impact Report (EIR)
State Clearinghouse No. 2006102033
CSLC EIR No. 737



Horizontal Directional Drilling (HDD)

Prepared for
California State Lands Commission

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EXECUTIVE SUMMARY

The staff of the California State Lands Commission (CSLC) has prepared this Environmental Impact Report (EIR) for the Line 108 Natural Gas Pipeline Project, as proposed by the Pacific Gas and Electric Company (PG&E), in accordance with the California Environmental Quality Act (CEQA). The CSLC is the Lead Agency for CEQA compliance in the preparation of this EIR. This EIR is meant to inform the public and permitting agencies about the potential adverse and beneficial environmental impacts of the proposed Project and its alternatives. Additionally, mitigation measures are recommended that would reduce any significant adverse impacts associated with the Project to the maximum extent possible and, where feasible, to a less-than-significant level.

PROJECT OBJECTIVES, PURPOSE AND NEED

PG&E has identified the following objectives and purposes for the proposed Line 108 Natural Gas Pipeline Project:

- To serve new gas distribution customers in Elk Grove and southeast Sacramento County, south of Mack Road and Gerber Road;
- To increase the level of service reliability by creating a looped network with Line 196, which would be available to approximately 150,000 gas customers currently served by Line 108 in Sacramento County, including the city of Galt;
- To create a greater pipeline system capacity to serve future large industrial transmission customers expected along the Interstate 80 and Highway 65 corridors;
- To increase capacity of the Sacramento Local Transmission System in order to transport gas to other high growth areas in North Sacramento, South Placer, and El Dorado Counties, by shifting one of the largest and fastest growing areas off of the Sacramento Loop; and
- To increase operational flexibility, allowing gas received from California Production via Line 196 west of Stockton, into the Sacramento Local Transmission System.

DESCRIPTION OF PROPOSED PROJECT

PG&E is proposing to replace approximately 11 miles of a partially inactive, 16-inch natural gas transmission line, Line 108, which extends from the Thornton Station, just

1 south of the Mokelumne River in San Joaquin County, to the Elk Grove Station, just
2 south of Elk Grove Boulevard in Sacramento County. The proposed new pipeline
3 diameter would be 24 inches. The majority of the proposed Project utilizes PG&E's
4 existing land rights by paralleling the partially inactive 16-inch pipeline. A combination
5 of construction techniques would be used to install the pipeline, including trench,
6 horizontal directional drill (HDD), and hammer bore. PG&E proposes to install
7 aboveground facilities at its Thornton, Franklin, and Elk Grove stations, including a new
8 pressure limiting station at the Elk Grove Station. The proposed Project also includes
9 the removal of a bridge that historically supported a section of the partially inactive 16-
10 inch natural gas pipeline over the Cosumnes River.

11 The open trench pipeline construction technique would use conventional trenching and
12 backfilling for pipeline installation. The HDD construction technique would employ a
13 hydraulically-powered horizontal drilling rig to tunnel under vertically and/or horizontally
14 large sensitive surface features such as water courses, levees, and wetlands. Hammer
15 boring is a non-steerable pipeline construction technique that drives an open-ended
16 pipe for short distances under surface features such as roads using a percussive
17 hammer. For this construction method, pits would be required on either side of the
18 surface feature to be avoided.

19 **ALTERNATIVES TO PROPOSED PROJECT**

20 Alternatives to the proposed Project were selected based on the information received
21 from PG&E, the EIR study team, and the public and local jurisdictions during the EIR
22 scoping period. Potential alternatives were reviewed against a set of specific screening
23 criteria as described in Section 3.0, Alternatives and Cumulative Projects. A number of
24 alternative routes were eliminated based on the infeasibility of constructing and operating a
25 pipeline along them. Those alternatives that were found to be technically feasible and
26 consistent with PG&E's objectives were reviewed to determine if the alternative had the
27 potential to reduce the environmental impacts of the proposed Project.

28 Three preliminary alternative routes were evaluated for consistency with the Project
29 objective of expanding the capacity of the existing transmission system to meet the
30 demand for natural gas due to the extensive residential growth in the Sacramento area.
31 The following preliminary alternatives were initially considered but rejected because of
32 the environmental impacts that would result: the Franklin Boulevard Alternative; the
33 Remove and Replace the Existing Line 108 Pipeline Alternative; and the Line 172/DFM
34 Alternative.

Four alternatives were evaluated in detail in this EIR, including the No Project Alternative, the Franklin 1 Alternative, the Franklin 2 Alternative, and the Project without Bridge Removal Alternative. The No Project Alternative would not result in the construction and operation of a natural gas pipeline between the Elk Grove and Thornton Stations by the January, 2009, winter season and could result in emergency curtailment or interruption of services to approximately 160,000 residential and small commercial gas accounts under Abnormal Peak Day design condition. Two route variations were evaluated with respect to feasibility and impacts for the northern portion of the pipeline route, from a point approximately 2,600 feet south of Bilby Road, north to the west side of Franklin Boulevard where the existing Line 108 crosses Franklin Boulevard and the UPRR. These are referred to as the Franklin 1 and Franklin 2 Alternatives. The Franklin 1 and 2 Alternatives would result in less construction work within the public rights-of-way (ROW) of Bilby Road and Franklin Boulevard. The Project without Bridge Removal Alternative would be the same as the proposed Project, except that the potentially historic suspension bridge across the Cosumnes River would not be removed.

ENVIRONMENTAL IMPACTS AND MITIGATION

The environmental impacts associated with construction and operation of the proposed Project are analyzed in this EIR using information provided by PG&E, field investigations, comments received during scoping, literature searches, and contacts with Federal, tribal, State, and local agencies.

In the evaluation of each resource category and issue in the EIR, the environmental setting is described; followed by a discussion of the regulatory framework; identification of significance criteria or thresholds; identification of applicable Applicant Proposed Measures, and a description of potential environmental impacts and proposed mitigation, as needed. The following sections summarize the potentially significant impacts that would result due to the implementation of the proposed Project.

Biological Resources

The proposed Project traverses various types of habitat including agricultural, ruderal, and annual grassland habitats. Seasonal wetland, vernal pool, emergent wetland, and riparian woodland habitats are also found along the proposed pipeline route. Literature searches and field surveys revealed 37 special-status plant and wildlife species that could potentially occur in the Project area.

Potentially significant impacts on biological resources in the Project area were identified for the following species or resources:

- vernal pools and vernal pool crustaceans;
- migrating fish species;
- California tiger salamanders;
- western pond turtles;
- giant garter snakes;
- tri-colored blackbirds;
- double-crested cormorant rookeries; and
- trees within the study area.

Each of the identified impacts would be associated with disturbance related to construction activities. All impacts can be mitigated to less than significant with the implementation of mitigation measures.

Other cumulative projects proposed at the north end of the proposed alignment may result in additional affects to vernal pools and seasonal wetlands in this area. Potentially affected species include vernal pool plants and crustaceans, and giant garter snake. Bird species such as Swainson's hawk and tri-colored blackbird also occur in the immediate vicinity and may be affected by cumulative project impacts to surrounding habitats. Cumulative impacts on biological resources would be less than significant with mitigation.

Hazards and Hazardous Materials

Unintentional releases of natural gas from the existing pipeline or the above ground facilities could pose risks to human health and safety. Natural gas could be released from a leak or rupture in one of the pipe segments. If the natural gas reaches a combustible mixture and an ignition source is present, a fire and/or explosion could occur, resulting in possible injuries and/or deaths.

The proposed Project pipeline and aboveground facilities would be designed, constructed, operated, and maintained in accordance with or exceeding U.S. Department of Transportation Federal Safety Standards. These regulations are intended to protect the public and to prevent natural gas facility accidents and failures and include specifications for material selection and project design based partially on the human population density near a proposed project.

A probabilistic pipeline risk assessment has been conducted for the proposed Project that considers the actual site population density, as well as the characteristics of the pipeline contents in the event of an unintentional release. The analysis used a baseline frequency of U.S. Department of Transportation reportable unintentional releases of 0.41 incidents per 1,000 mile-years, which is the actual frequency of reportable natural gas transmission pipeline releases from 2002 through 2006.

The total calculated individual risk of serious injury or fatality for the proposed Project is 4.08×10^{-6} . This represents a 1 in 245,000 (1:245,000) likelihood of the proposed Project causing a serious injury or fatality. This value is greater than the generally accepted significance criteria of 1:1,000,000 likelihood of a serious injury or fatality. As a result, the individual risk from the proposed Project is considered significant. With suggested mitigation, the individual risk would be reduced by approximately 50 percent, to 2.04×10^{-6} . However, the individual risk would still exceed individual risk significance thresholds. Therefore, Project impacts would be significant and unavoidable. From a system safety and risk of upset perspective the proposed Project would be cumulatively considerable, so cumulative impacts would also be significant and unavoidable.

Air Quality

The Sacramento Metropolitan Air Quality Management District (SMAQMD) construction NO_x threshold of 85 pounds per day would be exceeded by Project construction activities, resulting in a significant impact. To reduce construction emissions of NO_x , PG&E has committed to implementing SMAQMD standard mitigations to reduce NO_x emissions from off-road diesel powered equipment and control visible emissions from off-road diesel powered equipment, which would result in a 20 percent NO_x emission reduction. However, emissions would continue to exceed the significance threshold. The SMAQMD recommends that lead agencies require a fee-based mitigation approach for construction to reduce estimated impacts to less than significant levels. Therefore, implementation of the fee-based mitigation would reduce potentially significant impacts to less than significant.

Traffic and Transportation

Roadway trench techniques would be used to install the proposed pipeline within approximately 800 feet in Bilby Road. Approximately 3,600 feet of trenching and horizontal directional drill activities would occur within Franklin Boulevard. In addition, three Sacramento County roads (Dierson, Point Pleasant, and Core) would be crossed by pipeline trenching activities.

1 Encroachment permits would need to be secured from Sacramento County prior to
2 conducting work within a county road right-of-way (ROW). Trenching within these roads
3 would require either temporary lane closures or temporary closures of the roads, which
4 would disrupt the flow of traffic along these roads. Mitigation would be implemented
5 that requires preparation and implementation of Traffic Control Plans to help alleviate
6 traffic congestion and maintain access along the roads that would be disturbed by
7 trenching and drilling. Limits on disruption to private property access would also be
8 required. Planned traffic flow at these locations would prevent significant traffic
9 congestion and access restriction impacts. Impacts would be less than significant with
10 implementation of mitigation.

11 Cumulative projects that would include work within a public roadway would require an
12 encroachment permit from the applicable traffic control agency, which would include
13 traffic control permit stipulations. Any cumulative impacts on traffic and transportation
14 would be limited to temporary disruptions, such as slower traffic or detours, and would
15 be less than significant with implementation of mitigation measures.

16 **Noise**

17 It is anticipated that HDD pull-back activities would be required to occur during nighttime
18 hours at three locations. Sacramento County's nighttime exterior noise level of 50 dBA
19 would be exceeded at the closest residences to each of the two proposed HDD sites
20 that would require night-time pull-back activities and at the hydrostatic testing site.
21 However, nighttime noise impacts to nearby residences would be less than significant
22 with implementation of mitigation measures that would require PG&E to restrict hours of
23 construction to the less sensitive hours of the day to the maximum extent feasible, and
24 would require PG&E to implement an approved Noise Reduction Plan that would reduce
25 nighttime noise levels to less than 50 dBA at nearby residences within Sacramento
26 County.

27 **Cultural Resources**

28 One of the known cultural resources (i.e., the pipeline suspension bridge) in the Project
29 area qualifies as an eligible historic resource. The proposed removal of the bridge would
30 result in a significant and unavoidable impact. With regard to archaeological resources,
31 none have been identified along the proposed Project route. However, this does not
32 preclude the existence of unidentified, buried archaeological remains. Buried
33 archaeological remains such as prehistoric midden deposits, flaked and ground stone
34 artifacts, bone, shell, historic artifacts and features, or other potential cultural resources,

1 such as human remains, could be damaged during trenching, excavation, drilling, and
2 other construction related activities.

3 Mitigation measures would be implemented to ensure that proper procedures are
4 followed should an unanticipated cultural resource discovery occur. Impacts would be
5 reduced to less than significant levels.

6 With respect to historic resources, implementation of the Project would result in
7 significant cumulative impacts as a result of demolition of the 630-foot suspension
8 bridge crossing the Cosumnes River. With regard to other cultural resources, no
9 current or reasonably foreseeable future projects are proposed to occur in the
10 construction ROW of the proposed Project. The specific projects proposed near the
11 construction ROW of Line 108 would be required to implement mitigation measures
12 similar to those required by this EIR. Therefore, cumulative impacts on non-historic
13 cultural resources would be less than significant with mitigation.

14 **Recreation**

15 Short-term construction noise from Project construction activities could be audible to
16 recreation enthusiasts in the nearby Cosumnes River Preserve and the Stone Lakes
17 National Wildlife Refuge areas. The construction noise could degrade the quality of
18 recreational experiences at the preserve and refuge areas resulting in a potentially
19 significant impact. Mitigation would be required to reduce the potential impact to
20 recreational experiences within Cosumnes River Preserve and the Stone Lakes
21 National Wildlife Refuge areas to a less than significant level by avoiding construction
22 during high visitor use periods.

23 Construction activities associated with the removal of a suspension bridge that crosses
24 the Cosumnes River could temporarily prevent non-motorized canoes and kayaks from
25 traversing the river's channel in the bridge area (motorized boats are not permitted
26 within the Cosumnes River Preserve). This would result in potentially significant
27 impacts to recreational boating experiences on the Cosumnes River. Impacts would be
28 mitigated to less than significant levels by avoiding construction during high visitor use
29 periods and by notifying paddlers with signage.

1 **Summary of All Impacts**

2 Table ES-1 presents a summary of all impacts and mitigation measures for the
3 proposed Project. This table is presented by environmental issue area. Within each
4 issue area, each impact is described and classified, the recommended mitigation is
5 listed where applicable, and the level of impact with mitigation is stated. All significant
6 adverse impacts that remain significant after mitigation (identified as Class I in this
7 document) are presented first, followed by Class II significant adverse impacts that can
8 be eliminated or reduced below an issue's significance criteria, and by adverse impacts
9 that do not meet or exceed an issue's significance criteria (Class III). Beneficial impacts
10 (Class IV), if they would occur, are presented last.

11 **COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES**

12 The CEQA Guidelines (Section 15126.6 (d)) requires that an EIR include sufficient
13 information about each alternative to allow meaningful evaluation, analysis, and
14 comparison with the proposed Project. A matrix displaying the major characteristics
15 and significant environmental effects of each alternative may be used to summarize the
16 comparison. Table ES-2 provides a comparison of the proposed Project with each of
17 the Alternatives evaluated in this document, including the No Project Alternative.

Table ES-1. Summary of Environmental Impacts for the Proposed Project

Impact Class	I = Significant adverse impact that remains significant after mitigation.
	II = Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
	III = Adverse impact that does not meet or exceed an issue's significance criteria. Impact numbers are not applicable (NA) to Class III impacts.
	IV = Beneficial impact. Impact numbers are not applicable (NA) to Class IV impacts.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.1 Biological Resources			
BIO-1	Potential Impacts to Vernal Pools and Vernal Pool Crustaceans.	II	MM BIO-1. Application of Best Management Practices (BMPs).
BIO-2	Potential Impacts to Migrating Fish Species.	II	MM BIO-2. Implement the North Delta Construction Window.
BIO-3	Potential Impacts to California Tiger Salamanders.	II	MM BIO-3. Pre-Construction Surveys for California Tiger Salamander.
BIO-4	Potential Impacts to Western Pond Turtles.	II	MM BIO-4. Pre-Construction Surveys for Western Pond Turtle.
BIO-5	Potential Impacts to Giant Garter Snakes.	II	MM BIO-5. Pre-Construction Surveys for Giant Garter Snakes.
BIO-6	Potential Impacts to Tri-colored Blackbirds.	II	MM BIO-6. Pre-construction Surveys for Tri-colored Blackbirds.
BIO-7	Potential Impacts to Great Egret, Great Blue Heron, and Double-crested Cormorant Rookeries.	II	MM BIO-7a. Pre-Construction Breeding-Season Surveys. MM BIO-7b. Avoidance Measures.
BIO-8	Potential Impacts to Trees Within the Study Area.	II	MM BIO-8. Additional Protection for Sensitive Trees.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
NA	Potential Impacts to the Valley Elderberry Longhorn Beetle.	III	None required.
NA	Potential Impacts to Burrowing Owls.	III	None required.
NA	Potential Impacts to Swainson's Hawk and Other Raptors.	III	None required.
NA	Potential Impacts to Special Status Plants.	III	None required.
NA	Potential Impacts to Jurisdictional Waterways.	III	None required.
NA	Potential Impacts to Habitat within the Stone Lakes Refuge Conservancy Easement.	III	None required.
Section 4.2 Agricultural Resources			
NA	Permanent Conversion of Farmland.	III	None required.
NA	Conflict with Existing Land Use Plans, Policies, or Regulations for Agricultural Use or a Williamson Act Contract.	III	None required.
NA	Changes in the Existing Environment that Could Result in Conversion of Important Farmland, to Non-agricultural Uses.	III	None required.
Section 4.3 Geology, Soils, Paleontology, and Mineral Resources			
NA	Soil Settlement Could Damage Structures.	III	None required.
NA	Seismically Induced Ground Motion Could Damage Structures.	III	None required.
NA	Soil Erosion and Loss of Topsoil.	III	None required.
NA	Potential Reduction in Agricultural Productivity.	III	None required.
NA	Potential Impacts on Levees.	III	None required.
NA	Seepage Impacts.	III	None required.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
NA	Potential Impacts on Paleontological Resources.	III	None required.
Section 4.4 Hydrology and Water Quality			
NA	Impacts to Water Quality During Construction.	III	None required.
NA	Impacts to Water Quality During Operation and Maintenance.	III	None required.
NA	Impacts from Flooding.	III	None required.
Section 4.5 Hazards and Hazardous Materials			
HAZ-1	Risk of Serious Injuries and Fatalities Due to Project Upset.	I	MM HAZ-1a. Reduce the Potential for Serious Injuries and Fatalities. MM HAZ-1b. Implement Operation and Maintenance (O&M) Plan.
NA	Risk of Upset Anticipated Societal Impacts.	III	None required.
NA	Contamination from Leaks, Spills, and/or Handling of Hazardous Materials.	III	None required.
NA	Contamination from Lead-based Paint	III	None required.
NA	Exposure of Contamination by Excavation	III	None required.
NA	The Project Could Induce Wildland Fires	III	None required.
Section 4.6 Air Quality			
AQ-1	Construction NOx Emissions.	II	MM AQ-1. Air Quality Mitigation Fee.
NA	Other Criteria Pollutant Emissions Generated During Construction.	III	None required.
NA	Impacts to Sensitive Receptors.	III	None required.
NA	Project Generated Greenhouse Gas Emissions.	III	None required.
NA	Project Generated Odors.	III	None required.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.7 Traffic and Transportation			
TRA-1	Work within Public Roadways would Disrupt Traffic Flow.	II	MM TRA-1. Traffic Control Plans.
TRA-2	Work within Private Roadways and Driveways would Disrupt Residential Access.	II	MM TRA-2. Private Property Access.
TRA-3	Construction Activities could Disrupt Emergency Access.	II	MM TRA-1. Traffic Control Plans.
NA	Project Construction Worker and Truck Traffic.	III	None required.
NA	Project Induced Roadway Damage.	III	None required.
NA	Impacts to Parking Demand.	III	None required.
Section 4.8 Noise			
NOI-1	Nighttime Construction Activities Would Disturb Nearby Residences.	II	MM NOI-1a. Restrict Hours of Construction. MM NOI-1b. Noise Reduction Plan.
NA	Daytime Construction Activities Would be a Nuisance to Nearby Sensitive Receptors.	III	None required.
NA	Operation Noise Impacts.	III	None required.
NA	Construction Vibration Impacts.	III	None required.
Section 4.9 Cultural Resources			
CUL-1	Demolition of an Historic Resource.	I	MM CUL-1. Document the Pipeline Suspension Bridge to Historic American Engineering Record (HAER) Standards.
CUL-2	Unanticipated Discovery of Cultural Resources.	II	MM CUL-2. Unanticipated Cultural Resource Discovery Procedures.
NA	Unanticipated Discovery of Human Remains.	III	None required.
NA	Potential Impacts to the Western Pacific Railroad Grade.	III	None required.
NA	Potential Impacts to Benson's Ferry.	III	None required.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.10 Aesthetic/Visual Resources			
NA	No Impacts would occur.		
Section 4.11 Land Use and Planning			
NA	Potential Conflicts with any Adopted Land Use Plans, Policies, or Ordinances.	III	None required.
NA	Potential Conflicts with Applicable Habitat Conservation Plans or Natural Community Conservation Plans.	III	None required.
NA	Potential Division of an Established Community.	III	None required.
Section 4.12 Socioeconomic (Population/Housing/Public Services/Service Systems)			
NA	Project Induced Population Growth.	III	None required.
NA	Project Induced Impacts to Housing.	III	None required.
NA	Impacts to Fire and Police Services.	III	None required.
NA	Impacts to Water Supply.	III	None required.
NA	Impacts to Solid Waste Facilities.	III	None required.
NA	Impact to Underground Utility Lines and/or Facilities.	III	None required.
NA	Benefits to the Local Business/Labor Force.	IV	None required.
Section 4.13 Recreation			
REC-1	Noise Effects on Wilderness Areas.	II	MM REC-1. Construction Timing.
REC-2	Bridge Removal Effects on Recreational Boating.	II	MM REC-1. Construction Timing. MM REC-2. Posting of Signs Indicating Bridge Removal Construction Activities.
NA	Project Demand for Existing Parks.	III	None required.
NA	Impacts Related to New or Expanded Recreational Facilities.	III	None required.

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Impact No.	Impact	Impact Class	Recommended Mitigation Measures
NA	Access Restrictions to Recreational Areas.	III	None required.
Section 4.14 Environmental Justice			
NA	Project construction noise impacts on minority and low-income populations.	III	None required.
NA	Project risk of upset impacts on minority and low-income populations.	III	None required.

Table ES-2. Summary of Environmental Impacts for Proposed Project and Alternatives

Impact Class

I = Significant adverse impact that remains significant after mitigation.

II = Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.

III = Adverse impact that does not meet or exceed an issue's significance criteria. Impact numbers are not applicable (NA) to Class III impacts.

IV = Beneficial impact. Impact numbers are not applicable (NA) to Class IV impacts.

Impact No.	Impact	Proposed Project	No Project	Franklin 1 Alternative	Franklin 2 Alternative	Project w/o Bridge Removal
Section 4.1 Biological Resources						
BIO-1	Potential Impacts to Vernal Pools and Vernal Pool Crustaceans.	II	No Impact	II	II	II
BIO-2	Potential Impacts to Migrating Fish Species.	II	No Impact	II	II	II
BIO-3	Potential Impacts to California Tiger Salamanders.	II	No Impact	II	II	II
BIO-4	Potential Impacts to Western Pond Turtles.	II	No Impact	II	II	II
BIO-5	Potential Impacts to Giant Garter Snakes.	II	No Impact	II	II	II
BIO-6	Potential Impacts to Tri-colored Blackbirds.	II	No Impact	II	II	II
BIO-7	Potential Impacts to Double-crested Cormorant Rookeries.	II	No Impact	II	II	II
BIO-8	Potential Impacts to Trees Within the Study Area.	II	No Impact	II	II	II
NA	Potential Impacts to the Valley Elderberry Longhorn Beetle.	III	No Impact	III	III	III
NA	Potential Impacts to Burrowing Owls.	III	No Impact	III	III	III
NA	Potential Impacts to Swainson's Hawk and Other Raptors.	III	No Impact	III	III	III
NA	Potential Impacts to Special Status Plants.	III	No Impact	III	III	III

Impact No.	Impact	Proposed Project	No Project	Franklin 1 Alternative	Franklin 2 Alternative	Project w/o Bridge Removal
NA	Potential Impacts to Jurisdictional Waterways.	III	No Impact	III	III	III
NA	Potential Impacts to Habitat within the Stone Lakes Refuge Conservancy Easement.	III	No Impact	III	III	III
Section 4.2 Agricultural Resources						
NA	Permanent Conversion of Farmland.	III	No Impact	III	III	III
NA	Conflict with Existing Land Use Plans, Policies, or Regulations for Agricultural Use or a Williamson Act Contract.	III	No Impact	III	III	III
NA	Changes in the Existing Environment that Could Result in Conversion of Important Farmland, to Non-agricultural Uses.	III	No Impact	III	III	III
Section 4.3 Geology, Soils, Paleontology, and Mineral Resources						
NA	Soil Settlement Could Damage Structures.	III	No Impact	III	III	III
NA	Seismically Induced Ground Motion Could Damage Structures.	III	No Impact	III	III	III
NA	Soil Erosion and Loss of Topsoil.	III	No Impact	III	III	III
NA	Potential Reduction in Agricultural Productivity.	III	No Impact	III	III	III
NA	Potential Impacts on Levees.	III	No Impact	III	III	III
NA	Seepage Impacts.	III	No Impact	III	III	III
NA	Potential Impacts on Paleontological Resources.	III	No Impact	III	III	III
Section 4.4 Hydrology and Water Quality						
NA	Impacts to Water Quality During Construction.	III	No Impact	III	III	III
NA	Impacts to Water Quality During Operation and Maintenance.	III	No Impact	III	III	III
NA	Impacts from Flooding.	III	No Impact	III	III	III

Impact No.	Impact	Proposed Project	No Project	Franklin 1 Alternative	Franklin 2 Alternative	Project w/o Bridge Removal
Section 4.5 Hazards and Hazardous Materials						
HAZ-1	Risk of Serious Injuries and Fatalities Due to Project Upset.	I	No Impact	I	I	I
NA	Risk of Upset Anticipated Societal Impacts.	III	No Impact	III	III	III
NA	Contamination from Leaks, Spills, and/or Handling of Hazardous Materials.	III	No Impact	III	III	III
NA	Contamination from Lead-based Paint.	III	No Impact	III	III	III
NA	Exposure of Contamination by Excavation.	III	No Impact	III	III	III
NA	The Project Could Induce Wildland Fires.	III	No Impact	III	III	III
Section 4.6 Air Quality						
AQ-1	Construction NOx Emissions.	II	No Impact	II	II	II
NA	Other Criteria Pollutant Emissions Generated During Construction.	III	No Impact	III	III	III
NA	Impacts to Sensitive Receptors.	III	No Impact	III	III	III
NA	Project Generated Greenhouse Gas Emissions.	III	No Impact	III	III	III
NA	Project Generated Odors.	III	No Impact	III	III	III
Section 4.7 Traffic and Transportation						
TRA-1	Work within Public Roadways would Disrupt Traffic Flow.	II	No Impact	II	II	II
TRA-2	Work within Private Roadways and Driveways would Disrupt Residential Access.	II	No Impact	II	II	II
TRA-3	Construction Activities could Disrupt Emergency Access.	II	No Impact	II	II	II
NA	Project Construction Worker and Truck Traffic.	III	No Impact	III	III	III
NA	Project Induced Roadway Damage.	III	No Impact	III	III	III
NA	Impacts to Parking Demand.	III	No Impact	III	III	III

Impact No.	Impact	Proposed Project	No Project	Franklin 1 Alternative	Franklin 2 Alternative	Project w/o Bridge Removal
Section 4.8 Noise						
NOI-1	Nighttime Construction Activities Would Disturb Nearby Residences.	II	No Impact	II	II	II
NA	Daytime Construction Activities Would be a Nuisance to Nearby Sensitive Receptors.	III	No Impact	III	III	III
NA	Operation Noise Impacts.	III	No Impact	III	III	III
NA	Construction Vibration Impacts.	III	No Impact	III	III	III
Section 4.9 Cultural Resources						
CUL-1	Demolition of an Historic Resource.	I	No Impact	I	I	No Impact
CUL-2	Unanticipated Discovery of Cultural Resources.	II	No Impact	II	II	II
NA	Unanticipated Discovery of Human Remains.	III	No Impact	III	III	III
NA	Potential Impacts to the Western Pacific Railroad Grade.	III	No Impact	III	III	III
NA	Potential Impacts to Benson's Ferry.	III	No Impact	III	III	III
Section 4.10 Aesthetic/Visual Resources						
NA	No Impacts would occur.	No Impact	No Impact	No Impact	No Impact	No Impact
Section 4.11 Land Use and Planning						
NA	Potential Conflicts with any Adopted Land Use Plans, Policies, or Ordinances.	III	No Impact	III	III	III
NA	Potential Conflicts with Applicable Habitat Conservation Plans or Natural Community Conservation Plans.	III	No Impact	III	III	III
NA	Potential Division of an Established Community.	III	No Impact	III	III	III
Section 4.12 Socioeconomic (Population/Housing/Public Services/Service Systems)						
NA	Project Induced Population Growth.	III	No Impact	III	III	III
NA	Project Induced Impacts to Housing.	III	No Impact	III	III	III

Impact No.	Impact	Proposed Project	No Project	Franklin 1 Alternative	Franklin 2 Alternative	Project w/o Bridge Removal
NA	Impacts to Fire and Police Services.	III	No Impact	III	III	III
NA	Impacts to Water Supply.	III	No Impact	III	III	III
NA	Impacts to Solid Waste Facilities.	III	No Impact	III	III	III
NA	Impact to Underground Utility Lines and/or Facilities.	III	No Impact	III	III	III
NA	Benefits to the Local Business/Labor Force.	IV	No Impact	IV	IV	IV
Section 4.13 Recreation						
REC-1	Noise Effects on Wilderness Areas	II	No Impact	II	II	II
REC-2	Bridge Removal Effects on Recreational Boating.	II	No Impact	II	II	No Impact
NA	Project Demand for Existing Parks.	III	No Impact	III	III	III
NA	Impacts Related to New or Expanded Recreational Facilities.	III	No Impact	III	III	III
NA	Access Restrictions to Recreational Areas	III	No Impact	III	III	III
Section 4.14 Environmental Justice						
NA	Project construction noise impacts on minority and low-income populations.	III	No Impact	III	III	III
NA	Project risk of upset impacts on minority and low-income populations.	III	No Impact	III	III	III

1 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

2 The State CEQA Guidelines [section 15126.6 (d)] require that an EIR include sufficient
3 information about each alternative to allow meaningful evaluation, analysis, and
4 comparison with the proposed Project. The Guidelines [Section 15126.6 (e)(2)] further
5 state, in part, that “*If the environmentally superior alternative is the “No Project”*
6 *alternative*, the EIR shall also identify an environmentally superior alternative among the
7 other alternatives.” (Emphasis added).

8 Table ES-2 summarizes the environmental impacts for the proposed Project and
9 alternatives. The No Project alternative would not result in any impacts. Therefore, the
10 No Project alternative is the environmentally superior alternative.

11 Among the other alternatives, the determination of an environmentally superior
12 alternative is difficult because of the many factors that must be balanced. In addition,
13 although there would be minor differences of impacts between the proposed Project and
14 the Franklin Alternatives, the proposed Project and the Franklin Alternatives would all
15 result in the same impact significance levels within each environmental resource area.

16 The Franklin Alternatives would result in slightly lower probabilities of causing a serious
17 injury or death compared to the proposed Project and would result in lower construction
18 noise levels at nearby residences. However, the Franklin Alternatives would result in
19 additional impacts to biological resources, land use and planning, and recreation due to
20 the potential disturbance to the Stone Lakes National Wildlife Refuge associated with
21 the need for a pull-back area on the refuge. The Franklin Alternatives’ impacts
22 associated with all of the other environmental issue areas would be the same as for the
23 proposed Project.

24 The Project without Bridge Removal Alternative would eliminate the significant and
25 unavoidable (Class I) impact associated with removal of the suspension bridge that
26 would occur under the proposed Project. The Project without Bridge Removal
27 Alternative would also eliminate the potentially significant (Class II) impact to recreation
28 associated with removal of the bridge. All other environmental impacts under the
29 Project without Bridge Removal Alternative would be the same as for the proposed
30 Project. Because the Project without Bridge Removal Alternative would eliminate a
31 Class I impact and would not create any new or worsened impacts compared to the
32 proposed Project, the Project without Bridge Removal Alternative is selected as the
33 environmentally superior alternative.

1 KNOWN AREAS OF CONTROVERSY OR UNRESOLVED ISSUES

2 The comments received during the agency and public scoping period raised issues
3 related to increased seepage due to construction activities near levees, archeological
4 resources, encroachment on an adopted flood control plan, impacts to private irrigation
5 systems, impacts to biological resources, impacts to resources in the Legal Delta
6 Primary Zone, and impacts to air quality. Appendix B provides copies of comment
7 letters received during the NOP and scoping process, and indicates the section of the
8 EIR in which the issue is addressed.